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An analysis of the perceptions of treatment integrity in the pre-referral intervention process.

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Abstract

Special education service delivery has experienced many changes. Pre-referral intervention is the current method of choice to identify and treat mild disabilities in the general education classroom. The purpose of this study was to identify treatment variables and group variables that lead to treatment implementation in the general education classroom by the general education teacher. In addition, the current study sought to determine the relationship between general reason for referral (behavioral or academic) and treatment integrity. A significant relationship was found for the treatment variables and treatment integrity indicating that particular characteristics of an intervention lead to treatment integrity of that intervention. Statistical analyses did not reveal a significant relationship between group variables and reason for referral with treatment integrity.

An Analysis of Treatment Integrity in the Pre-referral Intervention Process

Statement of the Problem

The past three decades of special education service delivery have been characterized by constant change. With the passage of laws like P.L. 94-142 and P.L.101-476, the focus of special education shifted from one of identification and outside placement of children with disabilities, to identification and education for children with disabilities in an environment that allow for maximum exposure to non-disabled peers.

Identifying an efficient and appropriate method of early identification and intervention for children experiencing school difficulties is of vital importance. Currently, pre-referral intervention is being used to identify children experiencing school difficulties and document attempts to remediate these children in the general education classroom prior to referral to special education. The idea is that children with mild difficulties will be caught early and their problems will be addressed in the classroom, thereby avoiding an unnecessary special education referral.

It is clear that although several studies exist examining the pre-referral intervention process, many questions remain unanswered. The ratio of academic to

behavioral interventions is still undetermined. Also, the question of which variables have the greatest impact on treatment integrity has yet to be answered definitively. This study investigated variables that impact the pre-referral interventions in the general education classroom. The importance of examining treatment integrity will also be discussed.

The purpose of this study was to determine which variables affect treatment integrity in the pre-referral intervention process. Treatment integrity is defined as the intervention being carried out according to plan. The focus of the investigation was on general education teachers since implementation of interventions by the general education teacher will determine the success or failure of pre-referral intervention planning. The study included only teachers from the elementary education level. Several authors have found that elementary teachers are more likely to attempt in class interventions rather than refer to outside services (Eidle, Truscott, Meyers, & Boyd, 1998; Pugach, 1985). Since the most important component of the pre-referral intervention process is the intervention being carried out according to plan by the general education teacher, it is imperative to determine variables influencing the general education teacher.

Literature Review

The following section will review literature that is relevant to the current delivery of special education services. The primary focus will be on the pre-referral intervention process and the group and treatment variables that play a role in its' effectiveness. In addition, federal laws regarding the education of children with disabilities and the variance in state by state interpretation of these laws will be discussed.

History of Special Education Service Delivery

Early intervention for children experiencing difficulty in school has been in existence in one form or another since the 1960's. Prior to the passage of federal legislation (Education for All Handicapped Children Act in 1975, P.L. 94-142, now the Individuals with Disabilities Education Act, 1997), at least four million of the eight million children with disabilities were being excluded or underserved in public education (Smith, Dowdy, Polloway, & Blalock, 1997).

Federal legislation that arose to resolve the issue of exclusion and inappropriate placement for children with disabilities led to numerous changes in special education service delivery. Federal laws were put in place to guarantee children with disabilities free and appropriate public education (FAPE) in the least restrictive environment (LRE). Part B of P.L. 94-

142 (1975) provided free and appropriate public education for all children in the United States with disabilities. In 1990, P.L. 101-476 Individuals with Disabilities Education Act (IDEA)..."mandated that students with disabilities receive their education with nondisabled peers to the maximum extent appropriate" (Hardman, Drew, & Egan, 1999, p. 27).

Not only did states differ in their interpretation of special education service delivery, specific delivery decision were often made at the local level. Modifications in service delivery were made from one lawsuit to the next, each clarifying what was required of schools to provide FAPE in the LRE. With lawsuits came disagreements of definitions such as, mainstreaming, inclusion, and continuum of alternative placements, as well as defining placements like regular class, resource room, separate class, etc. (Crockett & Kauffman, 1999). Some of the problems came in placement determination. For example, if a child spent 60% of the day in a general education classroom and 40% of the day self-contained, how would this placement be described "for the books?"

Definitional variations have made it virtually impossible to uniformly describe special education service delivery in the United States since the passage of IDEA. What is known is that each state has developed its own interpretation of IDEA and local schools have

adapted their practices to meet these requirements (Crockett & Kauffman, 1999). Changes occur often as schools search for the best way to deliver FAPE in the LRE and as lawsuits clarify exactly what is required of the school.

By the late 1970's, professionals began to question practices which resulted in large numbers of children identified for special education services. Many of these children had mild disabilities that could have been ameliorated in the general education classroom. In addition, children were being treated with ineffective interventions, and growing numbers of inappropriate special education referrals became apparent (Algozzine, Ysseldyke, & Christenson, 1983). Increasing numbers of students were being referred, tested, and placed in special education programs without accountability. For instance, students were being placed into self-contained special education classes and not integrated into the general education classroom. There were no programs or guidelines in place to ensure that school personnel were appropriately identifying and placing students.

Financial incentives motivated the practice of students being placed in large numbers in programs by school systems that received enticements in the form of federal dollars. The financial rewards were received, not for quality programs, but for numbers of students

in specific special education categories (Parish & Chambers, 1996).

The current picture is quite different. For many local school districts, special education means soaring costs. Current data indicates the federal government funds about 8% of special education while state governments fund approximately 56% of the cost. The remainder of funds, about 36% of the cost, is the responsibility of local school districts (Parish & Chambers, 1996). However, state and federal funding actually varies greatly from state to state. Federal aid to states ranged from 3% to 65% of total special education costs. State aid ranged from 17% to 90% of total expenditures. Local costs for special education vary even more and range from less than 3% to over 70% of costs (Parish & Chambers, 1996).

In many cases, the local districts are controlled by state and federal mandates regarding which students they can serve and the extent of the services provided. The local districts are expected to cover the services and determine from where the money will come at a later time. In addition, many states are passing legislation that will cap the amount of property tax available for school funding. Financial factors, state and federal mandates, and social changes emphasize the importance of an efficient and proper method for early identification and intervention for children

experiencing school difficulties (Algozzine, Ysseldyke, & Christenson, 1983; Crockett & Kauffman, 1999; Parish & Chambers, 1996).

Pre-Referral Intervention

School professionals sought a method of intervention that would potentially eliminate the problems of inappropriate special education referral, ineffective intervention, and overidentification of children with mild disabilities. Increasingly, children with mild difficulties were being referred for special education. Following the referral, a full team of professionals completed a battery of tests during the assessment phase. Many children were found to be ineligible for special education due to the mild nature of their school problems. It became increasingly apparent that many of these children could receive short-term intervention within the general education classroom (Ysseldyke, Thurlow, Gladen, et al. 1983).

In addition, an investigation into referral practices found that the process of special education decision making was often vague, subjective, inconsistent, and rarely based on adequate data. Ysseldyke, Thurlow, Gladen et al. (1983), reported that teachers made no systematic effort to modify classroom instruction prior to referral and tended to refer students who "bother" them, leading to different teachers referring for different student problem

behaviors. A more recent study concluded that the general educators' underlying reason for referral to special education is removal of the child from their classroom (Gottlieb, Gottlieb, & Wishner, 1994). A new system was needed that would provide better services for students at-risk for school failure.

The new method of service delivery that has gained widespread acceptance is pre-referral intervention. A thorough review of relevant literature revealed that pre-referral intervention teams had a variety of names, including; Teacher Assistance Team, Mainstream Assistance Team, Child Study Team, Student Study Team, Intervention Assistance Team, Building Teams, Teacher Support Teams, Instructional Support Teams, Staff Support Teams, and Local School Teams. According to Fuchs, Fuchs, and Bahr (1990) pre-referral intervention is the modification of instruction or classroom management made by the general education teacher in an attempt to better serve students without disabilities who are experiencing difficulty in the classroom. Many early pre-referral intervention programs were developed to reduce inappropriate special education referrals by focusing on formal, data-based, behavioral consultation (Graden, Casey, & Christenson, 1985). Pre-referral interventions have two primary models of delivery: assistance teams and consultation. Some teams are made up solely of general education teachers or general

education and special education members. However, the majority of the teams are multi-disciplinary. Other teams are considered to offer consultation or behavioral consultation. The teams are problem-solving in focus (Allen & Graden, 1995; Kratochwill, Elliot, & Rotto, 1995; Zins & Erchul, 1995). "*Problem solving* refers to the *systematic approach* used to conceptualize a problem situation, identify needs, design strategies to meet those needs, and implement and evaluate strategies," (Allen & Graden, 1995, p. 667)

Much of the current research is focused on determining which model of delivery is the most effective. For the purpose of this study, pre-referral intervention team was defined as any team, more than one individual, that meets with the purpose of developing a general education classroom intervention to be carried out prior to, or in lieu of, referral to special education. It is not the goal of this research to determine which team model of pre-referral intervention delivery is most effective. Instead, the goal of this study is to identify aspects of interventions that make them realistic to the general education classroom teacher.

Pre-referral intervention practices have developed into a step in the process of special education eligibility. Most states require that the general education teacher develop interventions for students

experiencing difficulty in the classroom. Pre-referral intervention quickly evolved into a process of consultation; students were being indirectly served by individual professionals or a team of professionals who consulted and collaborated with the classroom teacher. Pre-referral intervention is now a prerequisite for referral to a Multi-Disciplinary Team in most states. For instance, in the state of Nebraska, Rule 51, part 006.01C mandates that, "For a school age student, a general education student assistance team or comparable problem solving team shall be used prior to referral for multidisciplinary team evaluation. The Student Assistance Team or comparable problem solving team shall utilize and document problem solving and intervention strategies to assist the teacher in the provision of general education."

Benefits of Pre-Referral Intervention

There are many benefits to the pre-referral intervention process. For instance, this process allows for the early detection and prevention of problems without attaching labels. In addition, pre-referral intervention is available to all students, not just those identified as requiring special education services (Zins & Ponti, 1990). Nelson, Smith, Taylor, Dodd, & Reavis, (1991) conducted a review of related research. This review indicated that pre-referral intervention can reduce the number of students referred

for special education services by 45%-64%, produce desired student performance, increase teachers' skills in educating students with academic and behavioral difficulties, and improve teachers' attitudes toward students experiencing problems. In addition to reducing the number of referrals to special education, pre-referral intervention increases the likelihood of a student remaining in the least restrictive environment.

Variables Impacting the Pre-Referral Intervention Process

Several variables have been identified to act as obstacles to the pre-referral process or to facilitate the process of pre-referral intervention. These variables will be discussed in depth in the next two sections.

Obstacles to Effective Implementation. Since the classroom teacher is in direct contact with the student and is the person carrying out the intervention, teacher commitment to the intervention is essential. In this regard, many concerns have been raised regarding problems associated with general education teacher involvement in the pre-referral intervention process.

Flugum and Reschly (1994) found that pre-referral intervention teams were developing interventions, but they seriously questioned how many were actually carried out in the classroom and how effective the ones carried out were. Inman and Tollefson (1988) reported

that more experienced educators reported significantly greater negativity towards the pre-referral intervention process. The teachers' belief was that their professional experience, coupled with their own attempts at early intervention in the classroom, gave them the ability to make appropriate referrals thereby bypassing the pre-referral intervention team. Wilson, Gutkin, Hagen, and Oats (1998) indicated that teachers focused their attention primarily on problem behaviors which would support their "diagnoses" and that this focus on problem behaviors would further indicate to the teacher that their interventions were unsuccessful.

In a study conducted by Harrington and Gibson (1986), teachers reported that pre-referral intervention teams failed to create new or innovative intervention plans, and 42% of the teachers reported they had not implemented the recommended interventions. These teachers also reported that they had attempted their own interventions and questioned the usefulness of team recommendations. Inman and Tollefson (1998) found that 90% of teachers reported the team asked them to implement interventions the teacher had already tried. Although teachers reported implementing interventions on their own, the quality of data collection and analysis techniques were questionable.

Lambert (1976) reported that general education teachers focused primarily on global solutions rather

than specific solutions. Not focusing on specific solutions related to the presenting problem creates an obstacle to effective use of the process. In addition, teachers were found to lack knowledge of intervention strategies and lacked the ability to operationally define problem behaviors.

Twenty-two years later, the picture is similar. In a study conducted by Wilson, Gutkin, Hagen, and Oats (1998), 94% of teachers used haphazard data collection methods and 79% were able to describe their approaches to analyzing this data only in vague terms. Teachers were reported to make decisions more on personal feelings than actual analysis of data. Similar results were found with regard to progress monitoring, with only 10% of the teachers using systematic methods to monitor progress. Furthermore, teachers reported resentment when classroom-based interventions were offered in place of special education placement.

Other problems occur in school systems when some team members, such as School Psychologists or Special Education Consultants have the primary role to "test and place" and do not engage in much direct service delivery. Several teachers have reported that these team members were seen as "outsiders" and barriers to service (Mamlin & Harris, 1998). Similarly, Wilson, Gutkin, Hagen, and Oats (1998) found that teachers viewed the pre-referral intervention team as an

additional step in the referral process that was not useful. Teachers in this study also reported that they had made the decision to refer the child to special education prior to the first team meeting.

Numerous studies have looked at sources of teacher resistance to the implementation of pre-referral intervention. These sources of resistance were summarized into six categories. "Although people resist change for different reasons, major sources of resistance include: (a) lack of participation in the change process, (b) fear of loss of instructional time, (c) miscommunication, (d) low tolerance for change, (e) fear of the unknown, and (f) legitimate opposition to change" (Margolis, Fish, & Wepner, p. 169, 1990).

Many obstacles to effective implementation of pre-referral intervention have been noted here. These obstacles include interventions not being carried out by the classroom teacher, teacher negativity towards the pre-referral process, lack of training in behavioral aspects of identification and intervention, and lack of training in the pre-referral intervention process. The next section summarizes literature that focuses on facilitation of the pre-referral intervention process.

Facilitate Improvement in Process. A number of suggestions have been made throughout the pre-referral intervention literature to facilitate cooperation

between the classroom teacher and the consultant. Suggestions to facilitate the pre-referral intervention process include: gaining the teacher's trust, identifying specific factors fostering resistance, developing adequate understanding of the student's instructional needs and the teacher's instructional style and strengths, and planning programs jointly with the teacher (Margolis, Fish, & Wepner, 1990).

Several factors, such as developing trust and planning programs jointly can be found in the research in social psychology and group decision making. Gutkin and Nemeth (1997) point out that ideas that facilitate the process do not routinely occur "naturally," but must be purposefully carried out by the school psychologist or other team members. Both the social psychology literature and the pre-referral intervention literature bring an interesting question to light. What strategies can the school psychologist use to affect pre-referral intervention success? The following studies attempt to answer this question.

Graden, Casey, and Bonstrom (1985) identified administrative support, availability of resources, sufficient time, consultant experience, and openness to change from traditional to new approach as imperative for change. Several factors have shown to be important aspects of consultation based programs. These factors include: administrative support, multi-level

participation in planning and decision-making, teacher ownership of intervention plan, compatibility of intervention with current classroom routine, clear and specific training regarding steps and strategies required for successful problem solving, and interdisciplinary training (Phillips, McCullough, Nelson, & Walker, 1992). Administrative support variables have been shown to significantly increase teacher satisfaction with teacher assistance teams (Kruger, Struzziero, Watts, & Vacca, 1995). The two most important administrative support variables are (a) to help find release time and (b) to provide positive feedback. There is no research, however, reporting the effects of administrative support on pre-referral intervention effectiveness. Furthermore, no conclusive studies have been documented showing that teacher satisfaction leads to effective interventions or treatment integrity.

Reason for Referral

The reason for special education referral may play a role in treatment integrity. However, the reason for referral and its relationship to treatment integrity has not been explored. Teachers are trained specifically in implementation of a variety of academic interventions and not trained in behavioral interventions. In addition, describing behaviors is inherently difficult. Therefore, it is likely that

reason for referral may affect treatment integrity of interventions carried out in the general education classroom.

The general reason for referral to the pre-referral intervention team can vary greatly. Ysseldyke, Pianta, Christenson, Wang, and Algozzine (1983) reported that reason for referral included learning, emotional, behavioral, and performance-related issues. Much of the current literature has combined these groups into two categories: academic and behavioral. Academic referrals include any learning or performance-related issues where improvement in academic areas are the goal. For example, a child whose primary concern is an inability to identify letters would be considered to be an academic referral. Behavioral referrals are any referrals in which the primary concern is a problem behavior that a child is exhibiting in the classroom. Examples of behavioral referrals (also called social-emotional) include, but are not limited to, aggressive behavior, attitude problems, poor peer relations, disruptive behavior, and attention problems. Typical behavior problems include children who are non-compliant (not following directions), or children who are off-task (not paying attention to teacher lecture or not completing in-class assignments, etc.).

Studies investigating the percentage of academic, behavioral, or academic-behavioral reason for referral

have been contradictory and vary greatly. Gottlieb, Gottlieb, and Trongone (1991) found that students were primarily referred for academic reasons and secondly for a combination of academic and behavioral reasons. They found that purely behavioral reasons accounted for only 10% of the referral cases.

Eidle, Truscott, Meyers, & Boyd (1998) examined referral issues in a small suburban school system and found that academic difficulties accounted for approximately 50% of referrals and behavior problems accounted for approximately 40% of the referrals. In other studies, over half of the referrals were for behavioral concerns while less than one-fourth were for academic concerns (Chalfant & Pysh, 1989; Chalfant, Pysh, & Moultrie, 1976). Over an eight year time period, examination of records of 202 pre-referral intervention cases found 67% of the interventions were for academic difficulties, 15% were for behavioral difficulties, and 14% academic-behavioral combined (Schaefer, 1998).

Other researchers have indicated that among at-risk students referred to the pre-referral intervention team, academic problems were secondary to their behavioral problems (Mamlin & Harris, 1998). This review reflects a lack of consensus regarding the percentages of referrals that are behavioral and those that are academic.

General education teachers may have more difficulty developing and implementing behavioral interventions than academic interventions. Teachers reported that they lacked training and ability in the pre-referral intervention process (Wilson, Gutkin, Hagen, & Oats, 1998). Eidle, Truscott, Meyers, and Boyd (1998) found that when teams converged to discuss behavioral issues they used poor problem solving methods by focusing primarily on the reason for referral (academic/ behavior problem) and within-child factors (social/emotional issues) rather than identifying target behaviors and generating possible interventions. The teams did not follow problem-solving procedures, leading them to inadequate analysis of the problem and poor intervention development. In addition, most of the interventions developed for behavioral issues were not in-class interventions. Instead the students were referred for services outside of the classroom and/or school.

Reasons for Evaluating Treatment Integrity

Flugum and Reschly (1994) investigated quality indicators of pre-referral interventions to identify predictors of an effective intervention. Quality indicators included behavioral definition, direct measure, step-by-step plan, treatment integrity, graphing of results, and direct comparison to baseline. Indicators were chosen following compilation of recent

literature regarding the importance of these particular steps in behavioral consultation. Pre-referral intervention success was defined as positive student outcomes. They determined that the greater the number of quality indicators implemented, the greater the intervention success. They also determined that the construct of treatment integrity was highly correlated to pre-referral intervention success. In fact, treatment integrity had a stronger relationship to improvement of behavior than any other indicator. Therefore, treatment integrity will be discussed in depth in this section.

Treatment integrity is defined as the intervention being implemented according to plan. Since treatment integrity has such a strong relationship to intervention success, it is imperative to determine what factors predict treatment integrity. Several researchers have questioned the effectiveness of pre-referral interventions (Flugum & Reschly, 1994; Harrington & Gibson, 1986). If treatment integrity does not occur, the effectiveness of the pre-referral intervention cannot be measured (Gresham, 1989).

Most of the research regarding treatment integrity involves the construct of treatment acceptability and how it relates to treatment integrity. Treatment acceptability is defined as the consultee's perception of a proposed treatment as fair, appropriate, and

reasonable (Kazdin, 1980). The research regarding treatment acceptability is inconclusive and lacks evidence regarding a relationship between treatment acceptability, treatment integrity, and treatment effectiveness. The minimal evidence maybe due to the use of hypothetical situations and perceived, rather than actual, effectiveness of treatment in research(Watson, Sterling, & McDade, 1997).

A study that examined the relationship between treatment acceptability and treatment integrity found that treatment integrity was unrelated to treatment acceptability (Sterling, Watson, Wildmon, Watkins, & Little, 1997, as cited by Watson, Sterling, & McDade, 1997). Wickstrom, Jones, LaFluer, and Witt (1998) reported that problem severity, treatment acceptability, and collaboration were not related to treatment integrity.

Ineffective interventions may occur due to the lack of treatment integrity rather than lacking quality interventions. Gresham (1989) theorized that many failed interventions are likely due to the treatment not being carried out as planned. Treatment integrity is not only an important aspect of pre-referral intervention success, it is also required scientifically to demonstrate that changes in behavior are functionally related to the treatment (Baer, Wolf, & Risley, 1968). Gresham (1989) argues that,

"establishing the integrity of treatments would appear to be one of the most important aspects of the scientific investigation of behavior change." (p. 38).

Treatment integrity also plays an important role when the intervention team and/or treatment agent try to modify the intervention treatment plan. If the treatment has not been implemented as planned, it would be difficult for the intervention team and/or treatment agent to identify the reasons for failure or to change the intervention to be more successful.

Gresham identified six factors that are related to treatment integrity in the school setting.

Complexity. The first factor identified is the complexity of the treatment. As a general rule, the more complex the treatment, the lower the treatment integrity.

Time. The second factor identified is the time required to implement the treatment. Lack of time is often noted by teachers to be a major problem in their profession. Eighty-seven percent of school psychologists surveyed in Iowa reported that consultee's most common reason for failing to implement the consultation plan was lack of time (Happe, 1982). Chalfant and Pysh (1989) also reported insufficient time and insufficient impact on student performance as two of the barriers to student interventions.

In contrast, Gansle and McMahon (1997) found that the more time the intervention took the higher the integrity, leading to question previous research that indicates time would decrease integrity. The authors posited that greater teacher investment in the intervention would lead to greater integrity. Thus, the issue of time involved in implementation of interventions is yet to be resolved.

Materials. The third factor identified was materials and resources required for implementation. In general, when the materials and resources necessary for implementation of the intervention were not typically found in the classroom, treatment integrity was quite low (Gresham, 1989).

Treatment Agents. The fourth factor identified was the number of treatment agents. If additional individuals were involved in carrying out part of the treatment, there was a greater likelihood of poor treatment integrity.

Perception of Effectiveness. The fifth factor identified was the perceived effectiveness of the treatment. For example, if the treatment is perceived to be effective by the treatment agent prior to implementation, the treatment may be implemented with greater integrity.

Motivation. Finally, the sixth factor identified was the motivation of the treatment agent. A teacher

whose motivation was to remediate the student rather than remove the student from the classroom had greater treatment integrity.

Clear definitions and manuals for administration of procedures have been reported to affect treatment integrity. For example, Gansle and McMahon (1997) found when participants were given clear definitions and guidelines for administration of procedures, treatment integrity exceeded 92% on a daily basis. Watson, Sterling, & McDade (1997) reported that type of training was significantly related to treatment integrity. These authors concluded that consultants should focus on explaining "how" to implement treatments in order to improve integrity. Adequate training may be an additional factor to add to Gresham's list of six factors that are related to treatment integrity in the school setting.

Many questions remain regarding treatment integrity in classroom based interventions. Most researchers must rely on teacher report of integrity, rather than direct observation. In addition, much of the empirical research reported between studies is contradictory. For example, Flugum and Reschly (1994) reported that three-fourths of the teachers implemented the interventions as planned and that treatment integrity was most strongly associated with pre-referral intervention effectiveness. In contrast,

Wickstrom, Jones, LaFluer, and Witt (1998) directly observed the use of classroom interventions and found that while teachers reported 54% integrity, the researchers observed the treatment implemented as planned only 4% of the time.

A possible reason for conflicting results is in the way that treatment integrity is measured in these studies. Some studies look at treatment integrity as either occurring or not occurring. That is, treatment integrity occurred if the intervention was carried out according to plan, and treatment integrity did not occur if the intervention was not carried out according to plan. Other studies determine percentages of integrity based on things like how many days the intervention was carried out or how many of the treatment components were implemented. In these studies, the conditions are set up *a priori* (the percentage of integrity the treatment agent will be responsible for implementing).

Summary and Conclusions

Previous research has shown pre-referral interventions to be the method of choice in attempting to remediate students at-risk for failure in the general education classroom. Pre-referral intervention is a method of classroom intervention that occurs prior to, or in lieu of, referral to special education. Benefits of pre-referral intervention include a

reduction in the number of students referred to special education, improvement in teacher's ability to educate students with academic or behavioral difficulties, and an improvement in teacher attitude regarding students with such difficulties (Nelson, Smith, Taylor, Dodd, & Reavis, 1991).

Quite often general education teacher's are concerned that pre-referral intervention plans are unrealistic and can not or should not be carried out in the classroom. In addition, teachers often report that pre-referral interventions are ineffective. Ineffective interventions may occur due to the lack of treatment integrity rather than lacking quality interventions.

Numerous studies support focusing consultative research on the consultative agent, general education teachers in the case of pre-referral interventions, due to the fact that the behavior of the consultative agent will ultimately determine the effectiveness of an intervention (Conoley & Gutkin, 1995; Gutkin & Conoley, 1990; Wilson, Gutkin, Hagen, & Oats, 1998).

Treatment integrity is defined as the intervention being implemented according to plan. Since treatment integrity has such a strong relationship to intervention success, it is imperative to determine what factors affect integrity. Since the classroom teacher is the person in direct contact with the student and the person carrying out the intervention,

teacher commitment to the intervention is essential. Numerous studies indicate that general education teachers often fail to implement the intervention as planned (Gresham, 1989; Harrington & Gibson, 1986; Margolis, Fish, & Wepner, 1990; Wickstrom, Jones, LaFluer, & Witt, 1998; Wilson, Gutkin, Hagen, & Oats, 1998). Flugum and Reschly (1994) determined that treatment integrity was most strongly associated with pre-referral intervention effectiveness. Gansle and McMahon (1997) determined that simply implementing an intervention improves student behavior. This study will use teacher perception of integrity by looking at treatment integrity as either being reported as occurring or not occurring. This method of examining treatment integrity is supported in the pre-referral intervention literature. Gansle and McMahon (1997) reported that if an intervention was implemented, regardless of level of treatment integrity, student behavior improved. Therefore, teacher implementation of an intervention in the classroom can effectively improve student behavior regardless of integrity level.

Gresham (1989) reported six main intervention components that affect treatment integrity. These components were intervention complexity, time, availability of materials and resources, number of treatment agents, perception of effectiveness, and motivation to refer student to special education. While

these variables have been reported to affect treatment integrity, the importance of each component has not been evaluated.

Many questions remain regarding the reason for referral to pre-referral intervention teams. Research that examined reason for referral (academic or behavioral) find that academic referrals account for 25-90% of referrals and behavioral referrals account for 10-50% of referrals. Issues raised by previous researchers (Eidle, Truscott, Meyers, & Boyd, 1998; Wilson, Gutkin, Hagen, & Oats, 1998), included poor problem-solving methods and lack of knowledge when dealing with behavioral issues. These studies indicated that treatment integrity for behavioral referrals may be in greater jeopardy than academic referrals.

The literature pertaining to pre-referral intervention span three decades. This may be part of the reason for such varying reports. Numerous changes have been made since the 1970's and 80's, both in theory and practice of special education delivery. Teacher perceptions and practices of service delivery may have also changed. In addition, many questions remain unanswered with regard to pre-referral interventions.

Present Study

The question of which variables have the greatest impact on treatment integrity has yet to be answered

definitively. The most important component of the pre-referral intervention process is the intervention being carried out according to plan by the treatment agent (general education teacher). Therefore, it is imperative to determine variables affecting the treatment agent. Thus, two research questions were initially be investigated:

(1) Does general reason for referral (behavioral or academic) affect treatment integrity? and

(2) What variables do the treatment agent (regular education teacher) report have the greatest impact on treatment integrity of an intervention in the general education classroom?

Previous research suggests the following variables impact treatment integrity: time, intervention complexity, availability of materials/resources needed, perception of effectiveness, and perception of child benefiting from classroom intervention or needing special education services (Chalfant & Pysh, 1989; Graden, Casey, & Bonstrom, 1985; Gresham, 1989). To date, no data exist to support one of the variables being a better predictor of treatment integrity than another. Therefore, this study is exploratory. It will seek to determine which factor(s) are reported to have the greatest impact on treatment integrity in the pre-referral intervention process. Based on results from the pilot study, I would hypothesize that general

reason for referral does affect treatment integrity. That is, academic referrals will have significantly more treatment integrity than behavioral referrals. Also based on results from the pilot study, I would also that teacher perception of effectiveness will be reported to have the greatest impact on treatment integrity of an intervention in the general education classroom.

The question of the percentage of academic and behavioral referrals that are addressed by pre-referral intervention teams is still unclear. In addition, group variables have yet to be examined thoroughly. Therefore, the following two research questions were addressed in this study:

(3) What is the percentage of academic and behavioral referrals to the pre-referral intervention team in the elementary school population?

(4) Do group variables such as number of team members, discipline of members on team, and team participation affect perception of treatment integrity in the pre-referral intervention process?

The answers to the above questions will contribute to the growing body of literature investigating the relationship between treatment variables and treatment integrity. Determining the types of problems pre-

referral teams typically deal with will assist team members in determining areas where further training may be necessary. Furthermore, this research will lead to increased awareness of the variables related to teacher perceptions of effective and realistic interventions for the general education classroom. The knowledge gained can be used during consultation in pre-referral intervention teams. In addition, information to develop interventions that will be accepted and carried out by the treatment agent will be gained. The goal of this research was to increase pre-referral intervention effectiveness by determining the variables most important in predicting treatment integrity.

Method

Participants

Three Midwestern suburban school districts participated in this study. The schools serve students who are primarily from Caucasian, middle-class households. Within those three school districts, 138 teachers from 13 elementary schools participated. The teachers were given the questionnaire during their pre-scheduled staff meeting. Most of the teachers completed the questionnaire, with the exception of a few who were new or student teachers and had not participated in the pre-referral process. Each participant completed one questionnaire. Participants consisted of general education classroom teachers with an average of 15.8

years of experience carrying out pre-referral interventions in the classroom. The general education teachers taught public school classes, grades K-6. The reason for selecting only elementary teachers is that previous research has shown that elementary teachers are more likely to try in-class intervention than secondary teachers (Eidle, Truscott, Meyers, and Boyd, 1998). For the purpose of this study, the teachers needed to be using a form of pre-referral process (i.e., assistance team, consultation). All of the participants were volunteers.

Materials

The materials included the informed consent forms and questionnaire (Appendix A). The teachers filled out the forms during a pre-scheduled staff meeting. Since this questionnaire was developed for the purpose of the current investigation, it was piloted and the results were examined. In the pilot study, 25 general education teachers were asked to respond to a questionnaire answering questions that pertained to the reason for referral, treatment integrity, and various group and treatment variables. Eleven teachers returned the questionnaires.

A chi-square test was performed to investigate the relationship between reason for referral (academic or behavioral) and treatment integrity (treatment integrity present or absent). Results from the pilot

study indicated that there was a significant relationship between general reason for referral and treatment integrity. Academic interventions were reported to have 100% integrity, whereas behavioral interventions had none (0%). Examination of the intervention plan indicated that the academic interventions were clear and specific. On the other hand, behavioral interventions were vague and ambiguous. The pilot study revealed that 73% of the referrals were for academic difficulties, and 27% of the referrals were for behavior problems.

A second chi-square test was performed to investigate the relationship between treatment integrity (treatment integrity present or absent) and treatment variables (clear/concise, time, materials, perception of effectiveness, need for specialized instruction, other). In the pilot study, perception of effectiveness was reported most frequently by teachers as the reason to continue or stop the intervention. Although the small sample size of the pilot study bring the results into question, they are consistent with a previous study at the same site. Over an eight year time period, examination of records of 202 pre-referral intervention cases found 67% of the interventions were for academic difficulties, 15% were for behavioral difficulties, and 14% academic-behavioral combined (Schaefer, 1998).

Revisions were made to the original questionnaire reflecting information gained from the pilot study. For instance, many teachers wanted to give more than one reason for modifying the treatment plan or not modifying the treatment. Therefore, the questionnaire was changed to allow teachers to rank reasons in order of importance. The reason ranked as most important by the teacher was examined. Teacher's were asked to report the reason for referral, whether it was an academic or behavioral problem, the intervention as planned, whether changes were made to the plan and why, the discipline and number of team members, who developed the plan, and whether the plan was realistic for the general education classroom. The questions asked were based on previous research in reason for referral and treatment integrity. Several teachers reported that the reason for referral was both academic and behavioral, therefore a third category (combined) was added.

Procedures

In order to recruit schools, announcements were made during a district principal's meeting. To recruit teachers, announcements were made during staff meetings at each of the elementary schools in the district. Teachers who chose to participate in the study were required to return an informed consent form. The teachers were given a general overview of the study

(Appendix B) and signed an informed consent form to participate in the study if they were willing to participate. The researcher making the announcements in the staff meetings gave the questionnaires to the prospective teachers. Teachers were asked to fill out the questionnaire for interventions first implemented by the teacher in the general education classroom. The teachers were then given questionnaires to answer and return, regarding specific pre-referral intervention cases. On the questionnaire, teachers provided information about reason for referral and treatment integrity. This method was chosen because other methods of assessing treatment integrity may produce reactive effects in the cueing of the consultee and alter the consultee's behavior. After the teachers completed the questionnaires, they were returned to the researcher in a sealed envelope. The participants were then given a $1.00 McDonald's gift certificate for each questionnaire returned.

Analyses

The independent variables in this investigation were categorical variables consisting of reason for referral (academic or behavioral), treatment variables (clear/concise, time, materials, perception of effectiveness, need for specialized instruction,other), and group variables(number of team members, discipline of members on team, and team participation). The

dependent or criterion variable in this study was dichotomous (i.e., yes/no) and represented group membership as either treatment implemented as planned or treatment not implemented as planned prior to the next scheduled team meeting.

First, the content of some of the questionnaire items was coded by two independent raters. Description of the intervention as reported by the teachers on the questionnaire was reviewed by the raters and then classified into one of three general categories. A rating of '1' was given to intervention descriptions that were unclear and ambigious, a '2' was given to intervention descriptions that were somewhat clear, not exact nor replicable, and a rating of '3' was given to interventions that were clear and concise and easily replicable. The raters were trained on the definitions of the categories prior to data coding and interrater agreement checks were conducted during data analysis. For all codes, interrater agreements were calculated by dividing the number of agreements by the number of agreements plus disagreements. Interrater reliability was 95%.

Data collectors coded reason for referral as academic, behavioral, or combined. The coders were trained on the definitions of the codes before coding data and interrater agreement checks were conducted during data analysis. For all codes, interrater

agreement was calculated as described above. Interrater reliability was 99%. In addition, teacher descriptions and reports were looked at qualitatively.

Second, chi-square analyses were performed in order to investigate the relationship between reason for referral (academic or behavioral) and treatment integrity (treatment integrity present or absent). A chi-square test was performed to investigate the relationship between treatment integrity (treatment integrity present or absent) and treatment variables (clear/concise, time, materials, perception of effectiveness, need for specialized instruction, other). A series of chi-square tests were performed to determine the relationship between treatment integrity (treatment integrity present or absent) and group variables (number of team members, discipline of members on team, and team participation). Each chi-square test compared the observed cell frequency with the expected cell frequency to determine the relationship between the two variables. Finally, qualitative analysis of open-ended questionnaire responses was conducted.

Results

A series of analyses were conducted on the teacher's responses to questionnaire items exploring the effect of general reason for referral, treatment variables and group variables on treatment integrity.

Tables 1 and 2 lists frequencies and means of questionnaire items. The data analyses indicated that the treatment variable of perception of effectiveness is a significant factor in whether or not teachers carry out interventions as planned.

Results from the questionnaires indicate that the majority of the interventions were for behavioral concerns (66%), followed by academic concerns (25%), and finally academic/behavioral combined (9%). Most interventions were for male students (73%), with only 27% for female students. Further analysis revealed that the majority of male interventions were for behavioral concerns (75%), while less than half of the female interventions were for behavioral concerns (46%). The average student age was 8.32 years.

Overall, teachers reported that 57% of the 138 interventions were carried out as planned. Chi-square analyses revealed that treatment variables affected treatment integrity; however, reason for referral and group variables did not significantly affect treatment integrity. Tables 3 and 4 list the frequency of treatment components that teachers reported in realistic and unrealistic interventions.

The next section will address the results for the four research questions. Each question will be followed by results and analyses.

Question #1. Does general reason for referral (behavioral, academic, or combined) affect treatment integrity?

Chi-square analyses compared the general reason for referral with treatment integrity. Results indicated no significant differences in treatment integrity across referral type (X^2=.31, NS). Analysis of the means indicated that treatment integrity was slightly higher for academic interventions than for behavioral or combined.

Question #2. What variables (time, intervention complexity, availability of materials/resources needed, perception of effectiveness, and perception of child benefiting from classroom intervention or needing special education services) do the treatment agent (regular education teacher) report have the greatest impact on treatment integrity of an intervention in the general education classroom?

Chi-square analysis revealed that overall treatment variables significantly affected treatment integrity (X^2=35.96, $p<.05$). Teachers reported perception of effectiveness most frequently as the reason to continue (n=31) or stop (n=23) the intervention. Due to the low number of academic/behavioral combined interventions, further analyses were run using only academic or behavioral interventions. Further analysis by reason for referral

indicated that treatment variables were reported to significantly affect treatment integrity for behavioral interventions (X^2=17.78, p<.05) and not for academic interventions (X^2=9.07, p<.05). Specifically, perception of effectiveness was reported by teachers most frequently as their reason for the intervention being carried out according to plan for behavioral interventions. When analyzing by integrity occurring or not occurring, treatment variables did not affect treatment integrity occurring (X^2=3.31, NS), but they did affect treatment integrity not occurring (X^2=13.79, p<.05). Table 2 shows the frequency of treatment variables reported by teachers. Teachers reported perception of effectiveness most frequently for not carrying out the intervention according to plan.

Question #3. What is the percentage of academic, behavioral, and combined referrals to the pre-referral intervention team in the elementary school population?

Thirty-four (25%) of the referrals were for academic difficulties, eighty-nine (66%) of the referrals were for behavioral difficulties, and 12 (9%) were combined. These results are not consistent with the pilot study or previous studies examining proportion of referral type.

Question #4. Do group variables such as number of team members, discipline of members on team, and team

participation affect treatment integrity in the prereferral intervention process?

The number of members on the team was broken down into three groups. Teams with 4 or less members were considered small groups, 5-8 members were medium sized, and 9 or more members were large groups. Fifty-seven teams were small, fifty-eight were medium in size, and seven were large. Chi-square analysis did not reveal a significant difference in team size and treatment carried out as planned (X^2=1.18, NS). Therefore, the results indicated that team size did not affect treatment integrity.

The discipline of the team members varied considerably. Typical or common groups did not emerge, making it impossible to group by discipline. Team membership consisted of general education teachers (n=128), special education teachers (n=69), speech language pathologists (n=24), school psychologists (n=62), nurse (n=0), parents (n=42), principal (n=70), vice principal (n=2), school social worker (n=15), reading specialist (n=25), special education consultant (n=14), specials (art, P.E., music, etc.) teachers (n=14), counselor (n=34), and paraprofessional (n=3).

Teachers reported team participation as the team developed the plan, the teacher developed the plan with the help of the team, the teacher developed the plan on his/her own, or someone else developed the plan. While

the greatest amount of integrity was reported for teachers developing their own plan, followed by teacher developing plan with help from the team, the team developing the plan, and someone else developing a plan, respectively. However, chi-square analyses did not reveal significant differences (X^2=2.11, NS).

Discussion

The purpose of this study was to explore the relationship between treatment variables, group variables, and reason for referral on the treatment integrity of pre-referral interventions. Treatment variables (clear and concise, time, materials, perception of effectiveness, need for specialized instruction) significantly impacted whether or not the intervention was carried out according to plan. Specifically, teachers reported perception of effectiveness most often as their reason for continuing or stopping an intervention. Reason for referral (academic, behavioral, combined) and group variables (who developed the plan) did not affect treatment integrity.

Teachers reported "perception of effectiveness" most frequently as their reason for carrying out an intervention as planned or not. However, qualitative analysis revealed that teachers reported making this decision based on feelings or intuition rather than data. For example, a teacher reported that they did not

carry out the intervention because, "It didn't seem to be working." In addition, teachers reported making this decision within the first 1 to 2 weeks of implementation of the intervention. These findings indicate that timelines for intervention implementation and decision points were not decided upon at the time the intervention was developed.

As found in previous research (Inman & Tollefson, 1988), teachers reported that they had tried many interventions on their own prior to raising their concern to the team. Little if any data were collected on these "interventions." In addition, several teachers reported that the team came up with possible suggestions to try in the classroom and did not actually develop a specific intervention. The teacher was then left on their own to decide which intervention to try, how to carry it out, how to progress monitor, and how to decide whether or not it was effective. This may be the primary reason for only 57% of the interventions being carried out as originally planned. The majority of the interventions that were not carried out as planned, were not carried out at all. While teachers report they have "tried everything," it is possible that they do not realize that it generally requires more than 2 weeks of an intervention to see a behavioral change (Gelfand & Hartmann, 1984; Rhode,

Jensen, & Reavis, 1998). This is evidence that further training of pre-referral team members is needed.

An important qualitative finding from this study was that while teachers were participants on prereferral teams, they often made reports that suggested they did not have a clear understanding of the process or the purpose of prereferral intervention. When teachers were asked to write out the intervention as planned for the student, only 25% of the behavioral interventions, 14% of the academic interventions, and none of the combined interventions were described clearly enough to be replicable. When a teacher reported the child was on a "behavior plan" without giving specifics of the plan (contingencies, reinforcements, goals, etc.), it is possible to conclude that the teacher did not have a clear understanding of the intervention components or that these components were not developed during the pre-referral team meeting. For example, when asked to write out the intervention as planned, one teacher wrote, "I am unclear as to the specific definition for the word 'intervention'. At what point in time do you mean? This is leaving me confused. We did try to help my student with suggestions. A list of ideas on how to help her was presented to me during the Teacher Assistance Team meeting, after a brainstorming session. I did try some of them." This particular teacher found the

"interventions" developed by the team unrealistic and too time consuming. Additional comments made while teachers were filling out the questionnaires lends support to the idea that the teams are not following a systematic, data based decision making process. Some of these comments included: "I don't know how to answer about the next planned team meeting because there wasn't one," or "There wasn't really an intervention, the team just came up with some ideas that I could try and I picked one."

Exploratory analysis of reason for referral indicated that referral type did not affect treatment integrity in this study, contradicting the findings in the pilot study. Lack of consensus regarding the percentages of referrals that are behavioral and those that are academic remains. The proportion of academic, behavioral, and combined interventions were not consistent with those in the pilot study. Several studies have reported very different proportions of intervention type. Chalfant and Pysh (1989) found that 50% of the referrals were for behavioral difficulties and 25% were for academic difficulties. Eidle, Truscott, Meyers, & Boyd (1998) examined reason for referral in a suburban district and determined that 50% of the referrals were for academic difficulties and behavior problems accounted for 40% of referrals. Conversely, Gottlieb, Gottlieb, and Trongone (1991)

reported that students were primarily referred for academic reasons and secondly for a combination of academic and behavioral reasons. Purely behavioral reasons accounted for only 10% of the referral cases. More research is necessary to determine what proportion of pre-referral interventions are academic, behavioral, or academic/behavioral combined. It is possible that the types of interventions developed by the team are specific to the school or district, or even a particular model of prereferral intervention. The only consistent finding in research on reason for referral is inconsistency in proportion of intervention type. Additional studies should focus on the factors that may contribute to differences in academic and behavioral referrals. Possible referral differences may be due to school factors (urban vs. rural, SES, size), teacher factors (teacher training, years of experience, teaching style), or administrative policy to name a few.

Reason for referral did differ between boys and girls. The majority of the referrals were for male students (73%). Most of the male referrals were for behavioral concerns (75%) and less than half of the female referrals were for behavioral concerns (46%). Previous studies suggest that children who are referred for special education evaluation share similar characteristics. These children tend to be males from

low socio-economic status (SES) who display externalizing behavior problems (Podell & Soodak, 1993; Safran & Safran, 1987). The findings in this study support past research indicating that referrals to Student Assistance Teams are primarily for male students exhibiting externalizing behavior problems. A possible teacher bias of low tolerance for behavior problems exhibited by male students may present a problem of boys being more at-risk for being labeled as special education students.

Finally, number of team members and team participation were not found to affect treatment integrity. General education teachers participated on all prereferral teams followed by principals. Since administrative support has been reported to be an important variable in teacher satisfaction with the process (Graden, Casey, & Bonstrom, 1985; Kruger, Struzziero, Watts, & Vacca, 1995), it is promising that at least half of the teams included the principal. While teachers did not comment on principal participation, it may be partially responsible for teacher's reports of supporting the pre-referral process. On the other hand, only 42 of the 138 teams included the parents. Additional research is necessary to determine why parents were involved in so few pre-referral team meetings. Were parents invited? If so, were meeting times accommodating to parents? Do parents

feel uncomfortable to attend team meetings? These are all questions that need to be answered. While parental participation may be difficult to obtain, teams should do the best they can to involve parents at this early stage.

Teachers overwhelmingly reported that interventions developed by the pre-referral team were realistic for the classroom (90%). This finding is discrepant from previous studies (Harrington & Gibson, 1986); Inman & Tollefson, 1988; Wilson, Gutkin, Hagen, & Oats, 1998)in which teachers were primarily negative towards the pre-referral process. Why teachers in this study did not make many negative comments regarding the process remains unclear. A possible reason may be that pre-referral intervention is required by law. Another possibility supported by previous research (Kruger, Struzzierro, Watts, & Vacca, 1995) is the administrative support of principal participation on the team. Post-hoc analysis did not reveal a significant relationship between principal participation and integrity. Evidence from the qualitative analysis suggests that teachers may feel positive about the process and willing to attempt classroom interventions. However, unless all team members are trained in a more systematic process, pre-referral interventions will only have limited success. Reports suggesting that the pre-referral process breaks

down due to teacher dissatisfaction with the process (Noell & Gresham, 1993) can not be supported with this study. On the contrary, the process seems not to be breaking down, but not carried out in a systematic way in the first place. Gansle and McMahon (1997) found when participants were given clear definitions and guidelines for administration of procedures, treatment integrity exceeded 92% on a daily basis. Watson, Sterling, and McDade (1997) reported that type of training was significantly related to treatment integrity. These authors concluded that consultants should focus on explaining "how" to implement treatments in order to improve integrity.

Implications for Practitioners

Based on teacher reports of realistic intervention components, as well as the results showing "perception of effectiveness" reported most frequently by teachers as their reason for continuing or stopping an intervention, pre-referral teams need to develop plans that are easy to implement and provide immediate feedback to the teacher, student, and parents. In addition, intervention duration and decision points must be made prior to intervention implementation. Follow-up meetings and consultation feedback throughout the intervention process is clearly needed. The purpose of the pre-referral team is not to give a teacher a laundry list of suggestions for them to try in the

classroom. It is to develop an intervention for children who are experiencing difficulties.

Following the problem solving model is crucial in developing interventions. Flugum and Reschly (1994) found that the number of quality indicators (behavioral definition, direct measure, step-by-step plan, treatment integrity, graphing of results, and direct comparison to baseline) implemented was significantly correlated with the improvement of behavior. Teachers cannot be expected to carry out each step on their own. Instead, general education teachers should be able to leave a pre-referral team meeting with a clearly written intervention for a student that includes an operational definition of the problem behavior or area of concern, who will intervene, how they will intervene, how often they will intervene, what is the goal of the intervention, and how long must the intervention be carried out before a decision is made to change the intervention, continue the intervention, or try something new altogether.

Limitations

Relying on teacher description of intervention plan on a questionnaire format may not accurately portray teacher understanding of plan. Instead, some teachers may be brief to save time. An interview format could assist the researcher in getting a better idea of teacher understanding of treatment components. In

addition, the generalizability of the study is limited to middle class, suburban school systems. Urban or rural or lower SES school systems may report different school problems. By increasing the number of participants and sampling districts from different regions of the country, the answer to the proportion of referral type in the elementary school population may become clearer.

Future Research

Future research should focus on further examination of the pre-referral team by observing team functioning. This could be done through direct observation of team meeting or analyzing charts and notes from the meetings. In addition, future studies on reason for referral should be done to assist in determining why different school systems have such widely varying referral reasons. The focus of referral reason research should be on factors that affect reason for referral. Possible factors include, but are not limited to, teacher factors, school factors, and administrative policy. Furthermore, there is a need for additional studies examining actual student outcome of pre-referral interventions.

Conclusion

The purpose of this investigation was to determine what variables lead to a treatment being carried out according to plan. Treatment variables were found to

significantly affect treatment integrity. However, many questions remain regarding the quality of interventions as developed by the pre-referral team. While the descriptions the teachers gave were ambiguous, it would be interesting to investigate the intervention as developed by the team. Unfortunately, many teachers reported that each team member took their own notes and there was no master intervention list. In addition, not one of the teachers reported a timeline or criteria for decision making which could indicate that the data-based decision making techniques are not being followed. Until team members are trained in data-based decision making techniques and following the model in practice, variables impacting treatment integrity in the pre-referral process shouldn't be examined further. Instead, future studies should focus on determining team members knowledge of problem solving and intervention development.

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Table 1

Teacher's Responses to Questionnaire Items

Item		Frequency
Reason for Referral:	Academic	34
	Behavioral	89
	Combined	12
Who Developed the intervention plan?		
The team		48
Teacher developed with help from team		52
Teacher developed on their own		24
Another individual developed the plan		10
Is the intervention realistic for the classroom?		
Yes		124
No		14

Note: Some of the questionnaires had missing information.

Table 2

Teacher's Responses to Treatment Integrity Variables

Item	Frequency
Reason for Integrity	
a. Not overly time consuming	19
b. Clear and Concise	29
c. Materials and resources readily available	16
d. Intervention appeared effective	31
e. Student will benefit from intervention	23
f. Only one person is required to carry out intervention	10
Reason no integrity	
a. Too time consuming	12
b. Too complex for classroom	3
c. Required materials and resources not found in classroom	5
d. Intervention was ineffective	23
e. Student needs Special Education	5
f. More than one individual was needed to carry out the plan	22

Note: Some of the questionnaires had missing information. Only three respondents marked 'g. other'

Table 3

Teacher's Report of Realistic Intervention Components

Component	Frequency
Simple interventions that can be carried out by a peer helper or assistant	23
Interventions that are clearly effective	20
Not overly time consuming	12
Easy to implement	11
Teacher ownership of plan	6
Interventions that provide immediate feedback to teacher, student, and parents	6
Team must work closely with teacher throughout the process	4
Interventions that parents are willing to implement at home	3

Note: These responses are from the question asking, "Do you think the intervention plan is realistic for implementation in the regular classroom? Explain."

Table 4

Teacher's Report of Unrealistic Intervention Components

Component	Frequency
Not enough time to implement without addition paraprofessional support	14
Teachers report trying many interventions prior to the pre-referral team	6
Students behavioral needs are perceived as too significant to be met by the classroom teacher (student needs professional help or specialized environment).	4
Difficult to impact children who have no structure at home	3

Note: These responses are from the question asking, "Do you think the intervention plan is realistic for implementation in the regular classroom? Explain."

Appendix A

Questionnaire

Teacher Information

Number of years of teaching experience_____

Current grade(s) teaching_____

Gender_____

Student Information

Age_____

Gender_____

Grade_____

"The problem I referred to the team was...

_____

_____

Type of referral:

Academic referrals include any learning or performance-related issues where improvement in academic areas are the goal. For example, a child whose primary concern is an inability to identify letters would be considered to be an academic referral. Behavioral referrals are any referrals in which the primary concern is a problem behavior that a child is exhibiting in the classroom. Examples of behavioral referrals include not following directions, inattention to teacher lecture, not completing in-class assignments, etc. Is the reason for referral a behavior problem or an academic problem?_____

Directions: Please answer the following questions regarding one particular intervention, behavioral or academic, which is currently in progress.

Write out the intervention as planned for the student:

1. Were any modifications made to the intervention plan prior to the next planned team meeting?

If you answered "yes" to question #1, please rank the following reasons for modification, rank only those that apply:

_____a. the intervention was too time consuming

_____b. the intervention was too complex to be carried out in the regular classroom

_____c. the intervention required materials and resources not found in the classroom

_____d. the intervention was ineffective

_____e. the student needs special education services

_____f. more than just the classroom teacher was needed to carry out the intervention

_____g. other: (please fill in reason)

If you answered "no" to question #1, please rank the following reasons for no modification, rank only those that apply:

_____a. the intervention was not overly time consuming

_____b. the intervention was clear and concise

_____c. the materials and resources needed were readily available

_____d. the intervention appeared to be effective

_____e. the student will benefit from the classroom intervention

_____f. only one person is required to carry out the intervention

_____g. other: (please fill in reason)

2. How many people were on the pre-referral intervention team?

3. What were their disciplines? (circle all that apply)

General Education Teacher Special Education Teacher

Speech-Language Pathologist School Psychologist

School Nurse Parent(s)

Principal Vice Principal

Other(please specify) School Social Worker

Chapter 1/Title 1/Reading Specialist SPED Consultant

4. Does the team have set membership?

If yes, what are their disciplines?

Who completes paperwork?

Who leads meeting?

5. Were you a participant on the team?

6. Who developed the intervention plan? (circle one)

a. the team

b. you developed the plan with assistance from the team

c. you developed the plan on your own

d. another individual developed the plan (please specify discipline)

7. Do you think the intervention plan is realistic for implementation in the regular classroom? Explain.

8. Do you think this child will be referred for special education services?

Appendix B

Script

I am conducting a study to identify realistic general education classroom interventions. To do this, I am asking general education teachers to fill out a questionnaire about one intervention they have attempted in their classroom. The intervention would be one that the teacher developed with the help of the pre-referral team. This team could be the Student Assistance Team, another teacher, or any other group that met with the purpose of developing a classroom intervention. The student for which the intervention was developed must not be receiving special education services. That is, a student who is experiencing academic or behavioral problems in the classroom who has not been verified as having a disability.

You are eligible to participate in this study because you are a general education teacher involved in the pre-referral process at your school. The information gained in this study will help us to better understand predictors of effective classroom intervention practices. All of the information will be kept confidential.

When you have completed the questionnaire, please put it in the envelope, along with the signed consent form, and seal the envelope. Data will be analyzed once it has all been gathered. You will be given a $1.00

McDonald's gift certificate for the questionnnaire you fill out. If you have any questions, feel free to ask. You may begin now.